

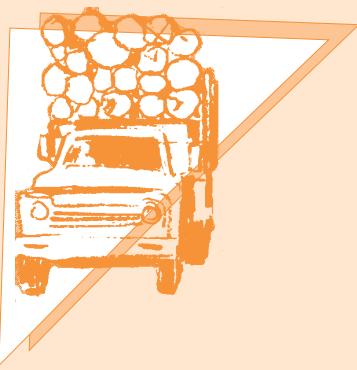
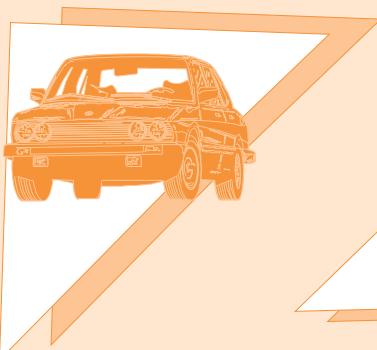
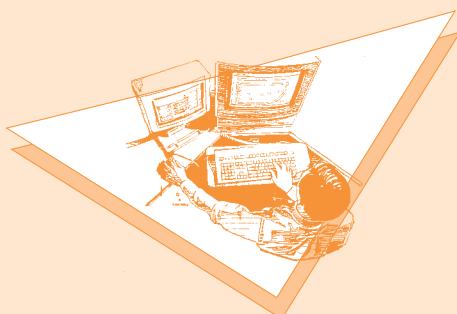
# Annual Benchmark Report for Wholesale Trade: January 1992 to March 2001

*A Detailed Summary for Wholesale Sales,  
Inventories, and Purchases*

Issued June 2001

BW/00-A

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Direct all inquiries concerning this report to **Scott Scheleur**, Service Sector Statistics Division, U.S. Census Bureau, Washington, DC 20233. Telephone: 301-457-2747 or 301-457-2764.

E-mail : Scott.A.Scheleur@census.gov

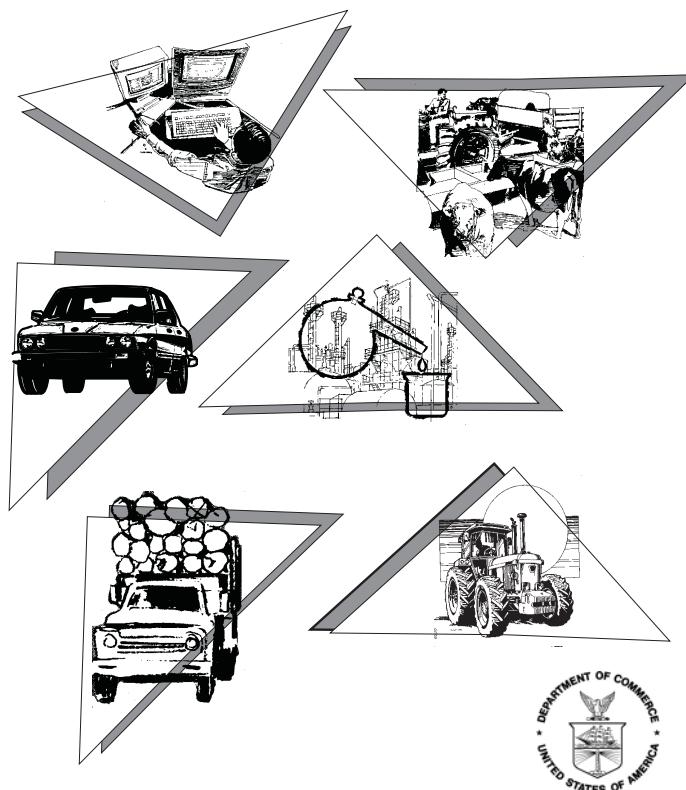
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**Donald L. Evans,**  
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**J. Lee Price,**  
Acting Under Secretary  
for Economic Affairs

**U.S. CENSUS BUREAU**  
**William G. Barron, Jr.,**  
Acting Director

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**Economics  
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Administration**

**J. Lee Price,**  
Acting Under Secretary  
for Economic Affairs



**U.S. CENSUS BUREAU**

**William G. Barron, Jr.,**  
Acting Director  
**William G. Barron, Jr.,**  
Deputy Director

**Vacant,**  
Principal Associate Director  
for Programs

**Frederick T. Knickerbocker,**  
Associate Director  
for Economic Programs

**Thomas L. Mesenbourg,**  
Assistant Director  
for Economic Programs

**Bobby E. Russell,**  
Acting Chief, Service Sector  
Statistics Division

## CONTENTS

### TEXT

Coverage . . . . .	v
Summary of Changes . . . . .	v
Derivation of Published Estimates . . . . .	v
Derivation of Estimates Required for Benchmarking . . . . .	v
Computation of Benchmarked Estimates . . . . .	vi
Caveats . . . . .	vii
Sample Design and Estimation Procedures . . . . .	vii
Sample Design . . . . .	vii
Reliability of the Estimates . . . . .	x
Adjustment for Seasonal and Trading-Day Variation . . . . .	xi
Scope of Survey . . . . .	xi
Definition of Terms . . . . .	xii
Classification Differences Between the Monthly Survey and the 1997 Census of Wholesale Trade . . . . .	xii

### DETAILED TABLES

1. Revised Adjusted and Unadjusted Estimates of Monthly Sales, Inventories, and Inventories/Sales Ratios of Merchant Wholesalers: January 1992 to March 2001 . . . . .	2
2. Estimated Annual Purchases, Gross Margins, and Gross Margin/Sales Ratios of Merchant Wholesalers by Kind of Business: 1992 Through 1998 . . . . .	22
3. Estimated Coefficients of Variation of Monthly Sales and End-of-Month Inventories . . . . .	23
4. Estimated Coefficients of Variation of Annual Sales, End-of-Year Inventories, Purchases, Gross Margins, and Gross Margin/Sales Ratios . . . . .	23

# Annual Benchmark Report for Wholesale Trade: January 1992 Through March 2001

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## COVERAGE

This publication provides estimates of monthly and annual sales and end-of-month non-LIFO (last-in, first-out) inventories for merchant wholesalers in the United States. Merchant wholesalers represent companies taking title to goods bought for resale to other businesses and excludes sales branches, agents, and brokers selling on a commission basis. Annual purchases and gross margin estimates are also provided. The estimates are presented at kind-of-business levels defined by the North American Industry Classification System (NAICS).

Previously, the U.S. Census Bureau maintained time series of monthly sales and end-of-month inventory estimates of merchant wholesalers based on the Standard Industrial Classification (SIC) system. The SIC-based time series ended with the March 2001 reference month. Merchant wholesale estimates published in all reports subsequent to this report will be on a NAICS basis.

For this report, the SIC-based monthly and annual estimates have been revised to a NAICS basis beginning with January 1992. Data prior to January 1992 were not restated on a NAICS basis, and are not comparable to the data in this report. A summary of changes from the prior benchmark report and the procedures for revising the SIC-based estimates are described below.

## SUMMARY OF CHANGES

New samples were introduced with the 1999 Annual Trade Survey (ATS) and with the March 2001 Monthly Wholesale Trade Survey (MWTS). The new samples are designed to produce estimates based on the North American Industry Classification System (NAICS) and replace samples designed to produce estimates based on the Standard Industrial Classification (SIC) system.

Previously published estimates of monthly sales and end-of-month inventories for January 1992 through March 2001, as well as estimates of annual sales, purchases, and end-of-year inventories for 1992 through 1998, were restated from a SIC basis to a NAICS basis. These restated estimates were input to the benchmarking program to revise the data. The benchmarking reflects results of the 1999 ATS and the 1997 Census of Wholesale Trade.

New factors, used to adjust sales estimates for seasonal and trading-day variations, were developed and used to adjust the revised estimates for January 1992 through March 2001. New factors were also developed and used to adjust the revised inventory estimates for the same period.

## DERIVATION OF PUBLISHED ESTIMATES

The monthly and annual estimates provided in this report were developed by restating the SIC-based estimates for 1992 through March 2001 on a NAICS basis and then applying a sequence of benchmarking procedures to the restated estimates. Before the benchmarking procedures were implemented, we restated the 1992 Economic Census sales totals to a NAICS basis, restated the SIC-based sample estimates to a NAICS basis, and derived the 1992 and 1997 purchases and end-of-year inventory estimates on a NAICS basis.

## DERIVATION OF ESTIMATES REQUIRED FOR BENCHMARKING

To obtain the 1992 Economic Census sales on a NAICS basis, the SIC code of each establishment in the 1992 census was converted to a NAICS code. First, each establishment with a SIC code related to only one NAICS code, was assigned that NAICS code. Remaining establishments that matched to the 1997 Census of Wholesale Trade by their identification number and SIC were assigned the NAICS codes assigned to them in the 1997 census. All other 1992 census establishments were randomly assigned a NAICS code using a probabilistic model. The model was based on relationships between SIC and NAICS code assignments in the 1997 census. After the classification code conversion, the 1992 census data were rebalanced on a NAICS basis.

To restate the monthly and annual estimates on a NAICS basis, we first distributed estimates for each SIC code to its corresponding NAICS code(s). When a NAICS code consisted of more than one SIC component, the distributed estimates from each SIC component were summed to give the restated NAICS estimate. Distributions for all data items were based on those observed in the 1997 Economic Census for sales.

To complete the restatement of the monthly sales estimates, we multiplied the monthly NAICS estimates prior to March 2001 by a geometric mean. The geometric mean links the monthly NAICS estimates derived from the SIC-based samples to estimates derived from the new NAICS-based samples. The geometric mean is computed as the square root of the product of two ratios. The numerators of the ratios are the February and March 2001 NAICS sales estimates derived from the newly introduced NAICS-based samples. The denominators of the ratios are the February

and March 2001 NAICS sales estimates derived from the SIC-based samples. We did the same procedure for end-of-month inventories.

To derive the 1992 and 1997 purchases and inventory estimates needed for the benchmarking process, we multiplied the NAICS census sales totals for 1992 and 1997 by ratios of the inventory-to-sales and purchases-to-sales computed from the restated annual estimates for the corresponding reference years.

## COMPUTATION OF BENCHMARKED ESTIMATES

### Annual Estimates

Restated estimates derived from the annual surveys were benchmarked to sales totals obtained from the 1992 and 1997 Censuses of Wholesale Trade.<sup>1</sup> The benchmarking revised the restated estimates of annual sales, end-of-year inventories, and annual purchases for 1992 through 1998 in a manner that

- constrained the 1992 and 1997 annual estimates to the NAICS results derived from the 1992 and 1997 Censuses of Wholesale Trade,<sup>2</sup> and
- minimized the difference between the year-to-year changes of the restated annual estimates (input series) and the revised estimates (output series).

One final adjustment was made to derive the published end-of-year inventory and purchases estimates for 1992 through 1998. First, the 1998 published end-of-year inventory was set to the benchmarked 1998 annual sales estimate multiplied by the 1998 inventory-to-sales ratio estimated from the 1999 ATS. Then, to derive the published estimates for 1992 through 1997, each of the benchmarked end-of-year inventory estimates was multiplied by the ratio of the published to benchmarked estimates of 1998 end-of-year inventory. A similar adjustment was made for purchases.

Estimates of annual sales, end-of-year inventories, and annual purchases for 1999 were computed by multiplying the published 1998 estimates by the ratio of the 1999-to-1998 estimates derived from the 1999 Annual Trade Survey.

Published estimates of annual sales, end-of-year inventories, and annual purchases were derived at detailed kind-of-business levels (usually defined by four-digit North American Industry Classification System codes). Summary totals were derived by summing the estimates for corresponding detailed levels.

### Estimates of Monthly Sales

For January 1992 through March 2001, restated estimates of monthly sales were changed in a manner that—

- constrained the sum of the 12 monthly sales estimates for a particular year to equal the benchmarked, restated annual sales estimates derived for the years 1992 through 1999 and
- minimized the difference between the month-to-month changes of the restated monthly estimates (input series) and the benchmarked monthly estimates (output series).

A mathematical result of the benchmarking methodology is that all input estimates following the end of the last benchmark year (1999) are derived by multiplying these estimates by the ratio of benchmarked-to-input estimate for the last month of the last benchmark year (1999). Therefore, for a specified sales series, a ratio of the December 1999 benchmarked estimate to the December 1999 restated, input estimate was computed. Estimates for periods following December 1999 were multiplied by these constant ratios (called carry-forward factors) to derive published sales estimates. The carry-forward factors remain constant until the next benchmarking operation.

### Estimates of End-of-Month Inventories

For January 1992 through March 2001, restated end-of-month inventory estimates were changed in a manner that

- constrained the end-of-year inventory estimates (derived from the monthly survey) for 1992 through 1999 to the published end-of-year inventory estimates derived from the annual survey, and
- minimized the difference between month-to-month changes of the restated estimates (input series) and the published estimates (output series).

Estimates subsequent to December 1999 were derived by multiplying the restated estimates by the ratio of the December 1999 published estimate to the restated estimate for December 1999. This ratio is the carry-forward factor for inventory and remains constant for all series until the next benchmarking operation.

### Dollar Values

All dollar values presented are expressed in current dollars; that is, the estimates are not adjusted to a constant dollar series. Consequently, when comparing estimates to prior years, users also should consider price level changes.

### Title 13, United States Code

Title 13 of the United States Code authorizes the Census Bureau to conduct censuses and surveys. Section 9 of the same Title requires that any information collected

<sup>1</sup>Estimates for NAICS code 4215 were not benchmarked to census levels. The estimates were derived directly from the annual surveys. The section entitled, "Classification Differences Between Monthly Survey and 1997 Census of Wholesale Trade" discusses why estimates were not benchmarked to census results.

<sup>2</sup>Because census inventory estimates do not reflect inventories of auxiliary and central administrative offices of merchant wholesalers, the 1992 and 1997 restated inventory estimates were used.

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under the authority of Title 13 be maintained as confidential. In accordance with this law governing Census Bureau reports, no estimates are published that would disclose the operations of an individual firm.

## Disclosure Limitation

Disclosure limitation is the process used to protect the confidentiality of the survey data provided by an individual firm. In accordance with Federal law governing Census Bureau reports, no estimates are published that would disclose the operations of an individual firm.

## Unpublished Data

Sales and inventory estimates for five-digit wholesale trade categories are not included in this publication because high sampling variability, poor response, or other factors may make them potentially misleading. Upon written request, for a nominal fee the Census Bureau will release these estimates for individual use, though not for publication.

## CAVEATS

Data before March 2001 should be used with caution. We expect that for estimates for NAICS codes that, by definition, are the same or nearly the same as a given SIC, the quality of the data will be similar to that of data released on a SIC basis. Note, however, that historical data for these series will differ from previously published numbers due to using results from the new NAICS-based samples in the benchmarking process.

Data will be of much less quality for series with NAICS codes that consist of more than one SIC component.

We expect estimates from January 1992 to December 1996 to be less accurate than estimates for later periods and that the earlier the period, the less accurate the results. The data developed for the January 1992 to December 1996 period depended more heavily on the conversion of SIC-based data to a NAICS basis than did data for later periods.

While data for January 1997 through March 2001 also depended on SIC-based data being converted to a NAICS basis, data collected on a NAICS basis were available for benchmarking the data for that period. Note, however, that trends for that period are dependent on the underlying SIC-based trends.

## SAMPLE DESIGN AND ESTIMATION PROCEDURES

### INTRODUCTION

The U.S. Census Bureau produces the Annual Benchmark Report for Wholesale Trade to provide national estimates of—

- annual sales and

- end-of-year inventories of merchant wholesale establishments by kind of business.

We develop the sales and inventory estimates in this report from probability samples that represent employer firms of all sizes and kinds of business that are merchant wholesalers throughout the nation.

## SAMPLE DESIGN

New samples were introduced with the 1999 Annual Trade Survey (ATS) and with the March 2001 Monthly Wholesale Trade Survey (MWTS). The new samples are designed to produce estimates based on the North American Industry Classification System (NAICS) and replace samples designed to produce estimates based on the Standard Industrial Classification (SIC) system. For January 2001 through March 2001, we requested data from both the prior and new samples. We used this data to link the estimates from the two samples. This section describes the design, selection, and estimation procedures for the new samples. For descriptions of the prior samples see the *Annual Benchmark Report for Wholesale Trade for January 1990 to February 2000* or prior benchmark reports.

### Sampling Frame

The sampling frame for the Monthly Wholesale Trade Survey and the Annual Trade Survey has two types of sampling units represented — Employer Identification Numbers (EINs) and large, multiple-establishment firms. Both sampling units represent clusters of one or more establishments owned or controlled by the same firm. The information used to create these sampling units was extracted from data collected as part of the 1997 Economic Census and from establishment records contained on the Census Bureau's Business Register as updated to June 1999. The next few paragraphs give details about the Business Register; the distinction between firms, EINs, and establishments; and the construction of the sampling units. Though important, they are not essential to understanding the basic sample design and readers may continue to the Stratification, Sampling Rates, and Allocation section.

The Business Register is a multirelational database that contains a record for each establishment with employees. The establishment is the smallest entity represented on the Business Register. An *establishment* is a single physical location where business transactions take place and for which payroll and employment records are kept. Groups of one or more establishments under common ownership or control are *firms*. A *singleunit* firm owns or operates only one establishment. A *multiunit* firm owns or operates two or more establishments. The treatment of establishments on the Business Register differs according to whether the establishment is part of a multiunit or

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singleunit firm. In particular, the structure of an establishment's primary identifier on the Business Register differs, depending on whether it is owned by a *singleunit* firm or by a *multiunit* firm.

A singleunit firm's primary identifier is its Employer Identification Number (EIN). The Internal Revenue Service (IRS) issues the EIN and the firm uses it as an identifier to report social security payments for its employees under the Federal Insurance Contributions Act (FICA). The same act requires all employer firms to use EINs. Because single-unit firms have only one establishment, there is a one-to-one relationship between the firm and the EIN. Thus the firm, the EIN, and the establishment all reference the same physical location and all three terms can be used interchangeably and unambiguously when referring to single establishment firms.

For multiunit firms however, a different structure connects an employer firm with its establishments via the EIN. Essentially a multiunit firm is associated with a cluster of one or more EINs and EINs are associated with one or more establishments. A multiunit firm consists of at least two establishments. Each firm is associated with at least one EIN and only one firm can use a given EIN. However, one multiunit firm may have several EINs. Similarly, there is a one-to-many relationship between EINs and establishments. Each EIN can be associated with many establishments but each establishment is associated with only one EIN. Because of the possibility of one-to-many relationships, we must distinguish between the firm, its EINs, and its establishments. The firm that owns or controls a multi-unit establishment is identified on the Business Register by way of the establishment's primary identifier.

A multiunit establishment's primary identifier consists of a unique combination of an alpha number and a plant number. The alpha number identifies the firm and the plant number identifies a particular establishment within the firm. All establishments owned or controlled by the same multiunit firm have the same alpha number. Different multiunit firms have different alpha numbers and different establishments within the same multiunit firm have different plant numbers. The Census Bureau assigns both the alpha number to the multiunit firm and the plant numbers to the corresponding establishments based on the results of the quinquennial economic censuses and the annual Company Organization Survey.

To create the sampling frame, we extract the records for all establishments classified as merchants within the Wholesale Trade sector as defined by the 1997 North American Industry Classification System. For these establishments, we extract sales, payroll, employment, inventory, name and address information, as well as primary identifiers and, for establishments owned by multiunit firms, associated EINs. We summarize the economic data of multiunit establishments to an EIN level by tabulating

the establishment data for all merchant wholesaler establishments associated with the same EIN. Similarly, we summarize to a multiunit firm level by tabulating the establishment data for all establishments associated with the same alpha number. These are the sampling units created from multiunit establishments. No aggregation is necessary to put singleunit establishment information on an EIN basis or a firm basis. Thus, the sampling units created for singleunit firms simultaneously represent establishment, EIN, and firm information. In summary, the sampling frame is a complex amalgam of establishments, EINs, and firms.

### **Stratification, Sampling Rates, and Allocation**

The primary stratification of the frame is by kind-of-business group based on the detail required for this publication. We further stratify the sampling units within kind of business groups (substratify) by a measure of size related to their sales. To reduce the variance of the estimates, the largest sampling units are selected "with certainty." This means they are sure to be selected and will represent only themselves (i.e., have a selection probability of one and a sampling weight of one). Within each kind of business stratum a substratum boundary (or cutoff) that divides the certainty units from the noncertainty units is determined. We based these cutoffs on a statistical analysis of data from the 1997 Census of Wholesale Trade. Accordingly, these values are on a 1997 sales (or inventory) basis. We also used this analysis to set sampling rates needed to achieve specified sampling variability objectives for sales (or inventory) estimates for different kind-of-business groups. Note that we computed sampling rates using data from the 1997 census. The actual sample size was determined by applying these sampling rates to the sampling frame constructed from the June 1999 Business Register. We then allocated the sample optimally based on the number of sampling units and standard deviation of the units' measures of size. The allocation is optimal in the sense that it achieves the minimum variance for a fixed sample size.

### **Sample Selection**

The first step in the sample selection identified certainty firms. If a firm had total merchant wholesale sales or inventories (for 1998 adjusted to a 1997 basis) greater than the corresponding certainty cutoff for its major kind of business, the firm was selected into the sample with certainty. In this case, the firm is considered the sampling unit. This has important consequences when the firm adds establishments. If a firm was selected with certainty and had more than one establishment at the time of sampling, any new establishments that the firm acquires, even if under new or different EINs, are included in the sample with certainty. However, if a singleunit firm was selected with certainty, only future establishments associated with that firm's originally-selected EIN are included in the

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sample with certainty; any new EINs that might later be associated with that firm are subjected to sampling through the quarterly birth selection procedure (see **Sample Maintenance**).

All firms not selected with certainty were subjected to sampling on an EIN basis. If a firm had more than one EIN, we treated each of its EINs as a separate sampling unit. To be eligible for the initial sampling, an EIN used by a single-unit firm had to have nonzero payroll in 1998. EINs used by multiunit firms were required to have nonzero payroll in 1997. The EINs were stratified according to their major kind of business and their estimated sales (on a 1997 basis). Within each noncertainty stratum, a simple random sample of EINs was selected. We then assigned the selected noncertainty EINs to one of two groups. One group is canvassed for both the monthly and annual surveys, the other only for the annual survey. The maximum sampling weight for an EIN selected for the monthly survey was 800. The maximum sampling weight for an EIN selected for the annual survey was 400.

## Sample Maintenance

Periodically, we update the sample to represent EINs issued since the initial sample selection. These new EINs, called births, are EINs recently assigned by the IRS, on the latest available IRS mailing list for FICA taxpayers, and assigned a kind-of-business classification (if possible) by the Social Security Administration (SSA).

EIN births are sampled on a quarterly basis using a two-phase selection procedure. In the first phase, births are stratified by kind of business and a measure of size based on expected employment or quarterly payroll. A relatively large sample is drawn and canvassed to obtain a more reliable measure of size, consisting of sales in two recent months, and a new or more detailed kind-of-business classification.

Using this more reliable information, the selected births from the first phase are subjected to probability proportional-to-size sampling with overall probabilities equivalent to those used in drawing the initial sample from the June 1999 Business Register. Because of the time it takes for a new employer firm to acquire an EIN from the IRS, and because of the time needed to accomplish the two-phase birth-selection procedure, births are added to the sample approximately 9 months after they begin operation.

The processing of the EIN births differs between the monthly (MWTS) and annual (ATS) surveys. For the MWTS, EIN births selected in a quarter are added into the survey during the next quarter. Because births are not represented in the monthly sample until they go through the two-phase selection procedure, an interim procedure is used to account for births during the period between the

onset of activity and the time of birth selection. This consists of imputing data for all firms in the current sample that have gone out of business but are still on the IRS mailing list.

For the ATS, EIN births that are selected in the quarterly birth-selection procedure in November of the annual survey year are included in the initial mailing of the ATS questionnaires in January of the following year. To better represent all EIN births in the annual survey year, and specifically to account for the time it takes to identify and select new EINs, we add births to the annual sample that are selected in February, May, and August of the year following the annual survey year. We mail survey forms to these births in June and August to supplement the initial annual survey mailing.

To be eligible for the sample canvass and tabulation, an EIN selected in the noncertainty sampling operations must meet both of the following requirements:

- It must be on the latest available IRS mailing list for FICA taxpayers from the previous quarter.
- It must have been selected from either the Business Register or the file of employer births.

EINs selected into the sample with certainty are not dropped from canvass and tabulation if they are no longer on the IRS mailing list. Rather, the business that used the EIN is contacted, and if a successor EIN is found, it is added to the survey. This is a more stringent quality control used for these larger businesses.

## Monthly Estimation Procedures

The estimates of monthly sales and end-of-month inventories published in this report are derived from data collected in the Monthly Wholesale Trade Survey. Each month, all firms selected with certainty (sampling weight equal to 1.0) and one of the two groups of noncertainty (sampling weight greater than 1.0) EINs are asked to report their sales and inventory data for the month just ending. (As noted in the **Sample Selection** section, noncertainty EINs are assigned to one of two groups. One group is canvassed for the monthly and annual survey while the other group is canvassed only for the annual survey.) Estimates of monthly sales and end-of-month inventories are computed as the sum of weighted data (reported and imputed) for all selected sampling units that meet the tabulation criteria given in the **Sample Maintenance** section. The weight for a given sampling unit is the reciprocal of its probability of selection into the monthly sample. The monthly estimates are benchmarked using the corresponding annual survey estimates and economic census results. See the **Derivation of Published Estimates** section located at the beginning of this report for a description of the benchmarking procedures.

## Annual Estimation Procedures

The annual sales, end-of-year inventories, purchases, and gross margin estimates published in this report are

derived from the Annual Trade Survey. All firms selected with certainty and both groups of noncertainty EINs are asked to report data for the previous year. (Two years of data are requested in the year in which a new sample is introduced.) Estimates are computed as the sum of weighted data (reported and imputed) for all selected sampling units that meet the tabulation criteria given in the **Sample Maintenance** section. The weight for a given sampling unit is the reciprocal of its probability of selection into the annual sample. Because both groups of noncertainty EINs are canvassed for the annual survey, the annual estimates have less sampling variability than the corresponding monthly estimates. The annual estimates presented in this report have been adjusted to results of the most recent economic census.

The estimates of end-of-year inventory published in this report are on a non-LIFO basis. For those firms that value inventory on a LIFO (last-in, first-out) basis, the LIFO reserve amount is added to the LIFO value to get inventory on a non-LIFO basis. In the Annual Trade Survey, sampling units that used a LIFO cost basis for all or part of their inventory were asked to report LIFO reserves.

The gross margin estimates represent sales less the cost of goods sold (see **Definition of Terms**) and are computed as a function of weighted sales, inventories, and purchases data from the Annual Trade Survey.

## RELIABILITY OF THE ESTIMATES

An estimate based on a sample survey potentially contains two types of errors - sampling and nonsampling. Sampling error occurs because only a subset of the entire population is measured in a sample survey. Nonsampling error encompasses all other factors that contribute to the total error of a sample survey estimate. The accuracy of a survey result may be affected by these two types of errors.

Sampling and nonsampling errors are often measured by the quantities, bias and variance. The *bias* of an estimator of an unknown population value is the difference, averaged over all possible samples of the same size and design, between the estimator and the unknown population value. Any systematic error, or inaccuracy that affects all samples of a specified design in a similar way, may bias the resulting estimates. The *variance* of an estimator is the squared difference, averaged over all possible samples of the same size and design, between the estimator and its average value.

Descriptions of sampling and nonsampling errors for the Monthly Wholesale Trade Survey (MWTS) and the Annual Wholesale Trade Survey (ATS) are provided in the following sections.

### Sampling Error

Because the estimates are based on a sample, exact agreement with the results that would be obtained from a complete enumeration of merchant wholesale firms represented on the sampling frame is not expected. However,

because each firm represented on the sampling frame has a known probability of being selected into the sample, it is possible to estimate the sampling variability of the survey estimates.

The particular sample used in this survey is one of a large number of samples of the same size that could have been selected using the same design. If all possible samples had been surveyed, under the same conditions, an estimate of an unknown population value could have been obtained from each sample. These samples give rise to a distribution of estimates for the unknown population value. A statistical measure of the variability among these estimates is the standard error, which can be approximated from any one sample. The *standard error* is defined as the square root of the variance. The *coefficient of variation* (or relative standard error) of an estimate is the standard error of the estimator divided by the estimator. Note that measures of sampling variability, such as the standard error and coefficient of variation, are estimated from the sample and are also subject to sampling variability. (Technically, we should refer to the *estimated* standard error or the *estimated* coefficient of variation of an *estimator*. However, for the sake of brevity, we have omitted this detail.) It is important to note that the standard error and coefficient of variation only measure sampling variability. They do not capture any systematic biases in the estimates. Table 3 provides the minimum, maximum, and median coefficients of variation for estimates of monthly sales and end-of-month inventories for each kind of business. The ranges and medians shown in Table 3 are based on *final* MWTS data for January 2001 and February 2001. Coefficients of variation for annual sales, end-of-year inventories, purchases, gross margin, and gross margin-to-sales ratios for each kind of business are provided in Table 4. These coefficients of variation are based on 1999 ATS data, adjusted to results of the 1997 Economic Census. (All coefficients of variation are expressed as percents.)

The estimate from a particular sample and the standard error associated with the estimate can be used to construct a confidence interval. A *confidence interval* is a range about a given estimator that has a specified probability of containing the estimator's corresponding, unknown population value. If, for each possible sample, an estimate of an unknown population value and its approximate standard error were obtained, then:

1. For approximately 90 percent of the possible samples, the interval from 1.65 standard errors below to 1.65 standard errors above the estimate would include the unknown population value.
2. For approximately 95 percent of the possible samples, the interval from two standard errors below to two standard errors above the estimate would include the unknown population value.

To illustrate the computation of a confidence interval for an estimate of total sales, assume that an estimate of total sales is \$10,750 million and the coefficient of variation for this estimate is 1.8 percent, or 0.018. First obtain the standard error of the estimate by multiplying the total sales estimate by its coefficient of variation. For this example, multiply \$10,750 million by 0.018. This yields a standard error of \$193.5 million. The upper and lower bounds of the 90-percent confidence interval are computed as \$10,750 million plus or minus 1.645 times \$193.5 million. Consequently, the 90-percent confidence interval is \$10,431 million to \$11,069 million. If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 9 out of 10 (90 percent) of these intervals would contain the results obtained from a complete enumeration.

### Nonsampling Errors

Nonsampling error encompasses all other factors that contribute to the total error of a sample survey estimate and may also occur in censuses. It is often helpful to think of nonsampling error as arising from deficiencies or mistakes in the survey process. In the MWTS and the ATS, nonsampling error can be attributed to many sources: inability to obtain information about all firms in the sample; response errors; differences in the interpretation of the questions; mistakes in coding or keying the data obtained; and other errors of collection, response, coverage, and processing. Although no direct measurement of the potential biases due to nonsampling error has been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize its influence.

A potential source of bias in the estimates is due to imputing data for nonrespondents and for data that fail edit. (Imputation is the process of replacing a missing value by a predicted value obtained from an appropriate model for nonresponse.) In any given month imputed data amounts to about 33 percent of the total monthly wholesale sales estimate and about 34 percent of the total wholesale end-of-month inventory estimate. For the annual survey, imputed data amounts to about 7 percent of the total wholesale sales estimate, about 12 percent of the total wholesale end-of-year inventory estimate, and nearly 14 percent of the total purchases estimate.

### ADJUSTMENT FOR SEASONAL AND TRADING-DAY VARIATION

We use the X-12 ARIMA Program to derive the factors for adjusting data for seasonal variations and, in the case of sales, for trading day differences. Seasonal adjustment of estimates is an approximation based on current and past experiences. Therefore, the adjustment could become less precise because of changes in economic conditions and other elements that introduce significant changes in seasonal and trading-day patterns.

Concurrent seasonal adjustment uses all available unadjusted estimates (including the latest *preliminary* estimates) as input to the X-12 ARIMA program. When unadjusted *preliminary* and final estimates become available, all estimates are used as input to the X-12 ARIMA program and new factors are applied to the *preliminary* and final estimates (1 month before the *preliminary*) and to the previous year estimates that correspond to the *preliminary* month.

### SCOPE OF SURVEY

Wholesale trade, as defined by sector 42 of the 1997 North American Industry Classification System manual, as covered in the 1997 Census of Wholesale Trade and 1999 Annual Trade Survey, includes establishments organized to sell or arrange the purchase or sale of a) goods to other wholesalers or retailers, b) capital or durable non-consumer goods, and c) raw and intermediate materials and supplies used in production.

- Wholesalers sell merchandise to other businesses and normally operate from a warehouse or office with a design and location that is not intended to solicit walk in traffic and with little or no display of merchandise.
- Customers are generally reached initially via telephone, in-person marketing, or by specialized advertising.
- Follow-up orders are either vendor-initiated or client-initiated generally based on previous sales, and typically exhibit strong ties between sellers and buyers.

The two principal types of establishments included in wholesale trade area are:

- a. Merchant wholesalers who take title to the goods they sell, such as wholesale merchants or jobbers, drop shippers, import/export merchants and sales branches.
- b. Agents, merchandise or commodity brokers, commission merchants, import/export agents and brokers, auction companies, and manufacturers representatives.

### Kind-of-Business Classifications

The durable goods group includes establishments primarily engaged in the distribution of goods classified in NAICS subsector 421. This group includes all establishments classified in the following categories:

NAICS	Kind of Business
4211	Motor Vehicles and Motor Vehicle Parts and Supplies
4212	Furniture and Home Furnishings
4213	Lumber and Other Construction Materials
4214	Professional and Commercial Equipment and Supplies
42143	Computer and Computer Peripheral Equipment and Software

NAICS	Kind of Business
4211	Motor Vehicles and Motor Vehicle Parts and Supplies
4212	Furniture and Home Furnishings
4213	Lumber and Other Construction Materials
4214	Professional and Commercial Equipment and Supplies
42143	Computer and Computer Peripheral Equipment and Software

4215	Metals and Minerals, except Petroleum
4216	Electrical Goods
4217	Hardware, and Plumbing and Heating Equipment and Supplies
4218	Machinery, Equipment, and Supplies
4219	Miscellaneous Durable Goods

For NAICS 4215, the estimated inventories include merchant wholesalers' inventories, as well as those of sales branches of ferrous metals service centers. The nondurable goods group includes establishments primarily engaged in the distribution of goods classified in NAICS subsector 422. This group includes all establishments classified in the following categories:

#### **NAICS Kind of Business**

4221	Paper and Paper Products
4222	Drugs and Druggists' Sundries
4223	Apparel, Piece Goods, and Notions
4224	Groceries and Related Products
4225	Farm Products Raw Materials
4226	Chemicals and Allied Products
4227	Petroleum and Petroleum Products
4228	Beer, Wine, and Distilled Alcoholic Beverages
4229	Miscellaneous Nondurable Goods

#### **DEFINITION OF TERMS**

##### **Sales.** Sales include:

1. Merchandise sold for cash or credit at wholesale and retail by establishments primarily engaged in merchant wholesale trade;
2. Receipts from customers for rental or leasing of equipment, instruments, tools, etc.;
3. Receipts for delivery, installation, alteration, maintenance, repair, storage, and other services; and
4. Gasoline, liquor, tobacco, and other excise taxes which are paid by the manufacturer and passed along to the wholesaler.

Sales are net after deductions for refunds and allowances for merchandise returned by customers. Sales that are made on an agency basis for others are included as gross sales. Direct shipments on orders from wholesalers are also included in sales. Total sales do not include non-operating income from such sources as investments, rental or sale of real estate, etc.

Sales exclude sales taxes and excise taxes collected directly from customers and paid directly to a local, state, or Federal tax agency. Also excluded are receipts from customers for carrying or other credit charges.

**Inventories.** Inventories represent stocks on a non-LIFO basis (firms that valued inventory on a LIFO basis included the values of LIFO reserve in the total inventory levels) of

merchandise owned by merchant wholesalers at the end of the month, regardless of location, except for goods held outside the United States. Goods held on consignment and items not held for sale such as fixtures, equipment, and supplies are not included. Goods held in foreign trade zones in the United States are also included. Methods of valuation may vary according to the accounting practices of the firm.

**Inventories/Sales Ratios.** The inventories/sales ratios are derived by dividing the dollar value of inventories by the dollar value of sales. No adjustment is made in these ratios for the markup in sales that may vary from trade to trade.

**Purchases.** Purchases represent the total cost of merchandise acquired for resale during the year, whether or not payment for the merchandise was made during the year. Purchases are net of returns, allowances, and trade and cash discounts, but include payments by the wholesaler for freight, insurance, import duties, and credit and other charges. Purchases exclude the cost of containers, wrapping, packaging, and selling supplies. Also excluded are liquor and tobacco tax stamps.

**Cost of Goods Sold.** Cost of goods sold are not shown in this report but can be derived by subtracting gross margin data from annual sales data. They represent the total cost of merchandise sold for cash or credit at wholesale and retail by establishments primarily engaged in merchant wholesale trade. Cost of goods sold is calculated by adding all purchases of merchandise (net of returns, allowances, and discounts, but including charges for freight, insurance, etc.) during the year to the beginning year inventories, then deducting the end-of-year inventories from the total. Firms were instructed to exclude the cost of containers, wrapping, packaging, and selling supplies in the cost of purchases. Purchase of tax stamps and payments of excise taxes often included by tobacco and liquor wholesalers in their purchases were excluded from cost of goods sold.

**Gross Margin.** Gross margin represents sales less cost of goods sold. Gross margin is equivalent to the cost of all materials (as distinguished from goods to be resold) and services provided in merchant wholesale establishments, whether provided by the merchant wholesaling firm itself or purchased by it from others. To the extent that it includes cost of contract work done by others on materials of the merchant wholesale firms, gross margin includes an element of value added by manufacturing.

#### **CLASSIFICATION DIFFERENCES BETWEEN THE MONTHLY SURVEY AND THE 1997 CENSUS OF WHOLESALE TRADE**

Establishments in the census that are classified in the Farm Product Raw Materials group (NAICS code 4215) include, in their sales, products purchased and transferred

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to other company establishments. In the monthly survey, intercompany transfers are not included in sales. Because of these differences, we use estimates from the Annual Trade Survey.

Inventories were not benchmarked to the census inventory levels, because the census of wholesale trade does

not include inventories of auxiliary and central administrative offices of merchant wholesale establishments. These offices, however, are included in the monthly and annual survey inventory estimates.

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## Detailed Tables

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**Table 1. Revised Adjusted and Unadjusted Estimates of Monthly Sales, Inventories, and Inventories/Sales Ratios of Merchant Wholesalers: January 1992 to March 2001**

[Sales and inventories in millions of dollars]

NAICS Code	Kind of business	2001											
		Jan.	Feb.	Mar. <sup>P</sup>	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	<b>ADJUSTED<sup>1</sup></b>												
	Sales, total .....	233,960	233,080	230,478	NA								
421	Durable goods .....	118,650	118,400	117,410	NA								
4211	Motor vehicle & motor vehicle parts & supplies .....	16,772	16,346	16,307	NA								
4212	Furniture & home furnishings .....	3,861	3,828	3,836	NA								
4213	Lumber & other construction materials .....	5,963	6,050	6,010	NA								
4214	Professional & commercial equip. & supplies .....	22,548	22,637	22,347	NA								
42143	Computer & computer peripheral equip. & software .....	13,023	12,815	12,569	NA								
4215	Metals & minerals, ex. petroleum .....	7,946	8,034	7,860	NA								
4216	Electrical goods .....	19,941	19,465	19,407	NA								
4217	Hardware, & plumbing & heating equip. & supplies .....	5,407	5,445	5,403	NA								
4218	Machinery, equipment, & supplies .....	21,919	22,430	22,262	NA								
4219	Miscellaneous durable goods .....	14,293	14,165	13,978	NA								
422	<b>Nondurable goods</b> .....	<b>115,310</b>	<b>114,680</b>	<b>113,068</b>	<b>NA</b>								
4221	Paper & paper products .....	6,599	6,561	6,490	NA								
4222	Drugs & druggists' sundries .....	15,006	15,118	15,054	NA								
4223	Apparel, piece goods, & notions .....	7,634	7,515	7,350	NA								
4224	Groceries & related products .....	33,333	33,475	33,765	NA								
4225	Farm product raw materials .....	9,454	9,685	9,718	NA								
4226	Chemicals & allied products .....	5,040	5,168	5,085	NA								
4227	Petroleum & petroleum products .....	15,842	14,763	13,984	NA								
4228	Beer, wine, & distilled alcoholic beverages .....	6,220	6,262	6,023	NA								
4229	Miscellaneous nondurable goods .....	16,182	16,133	15,599	NA								
	<b>Inventories, total</b> .....	<b>302,222</b>	<b>301,541</b>	<b>301,818</b>	<b>NA</b>								
421	<b>Durable goods</b> .....	<b>193,214</b>	<b>192,094</b>	<b>191,297</b>	<b>NA</b>								
4211	Motor vehicle & motor vehicle parts & supplies .....	26,141	26,109	25,937	NA								
4212	Furniture & home furnishings .....	5,955	5,931	5,936	NA								
4213	Lumber & other construction materials .....	6,665	6,633	6,601	NA								
4214	Professional & commercial equip. & supplies .....	26,144	26,026	25,589	NA								
42143	Computer & computer peripheral equip. & software .....	10,849	10,738	10,690	NA								
4215	Metals & minerals, ex. petroleum .....	14,026	13,862	13,668	NA								
4216	Electrical goods .....	30,230	29,889	30,038	NA								
4217	Hardware, & plumbing & heating equip. & supplies .....	10,830	10,749	10,738	NA								
4218	Machinery, equipment, & supplies .....	49,604	49,769	49,784	NA								
4219	Miscellaneous durable goods .....	23,619	23,126	23,006	NA								
422	<b>Nondurable goods</b> .....	<b>109,008</b>	<b>109,447</b>	<b>110,521</b>	<b>NA</b>								
4221	Paper & paper products .....	6,781	6,896	6,764	NA								
4222	Drugs & druggists' sundries .....	22,153	21,897	22,962	NA								
4223	Apparel, piece goods, & notions .....	12,319	12,572	12,697	NA								
4224	Groceries & related products .....	21,885	21,808	21,815	NA								
4225	Farm product raw materials .....	10,811	10,925	10,691	NA								
4226	Chemicals & allied products .....	5,627	5,567	5,649	NA								
4227	Petroleum & petroleum products .....	4,338	4,388	4,341	NA								
4228	Beer, wine, & distilled alcoholic beverages .....	6,724	6,636	6,703	NA								
4229	Miscellaneous nondurable goods .....	18,370	18,758	18,909	NA								
	<b>Inventories/sales ratios, total</b> ..	<b>1.29</b>	<b>1.29</b>	<b>1.31</b>	<b>NA</b>								
421	<b>Durable goods</b> .....	<b>1.63</b>	<b>1.62</b>	<b>1.63</b>	<b>NA</b>								
4211	Motor vehicle & motor vehicle parts & supplies .....	1.56	1.60	1.59	NA								
4212	Furniture & home furnishings .....	1.54	1.55	1.55	NA								
4213	Lumber & other construction materials .....	1.12	1.10	1.10	NA								
4214	Professional & commercial equip. & supplies .....	1.16	1.15	1.15	NA								
42143	Computer & computer peripheral equip. & software .....	0.83	0.84	0.85	NA								
4215	Metals & minerals, ex. petroleum .....	1.77	1.73	1.74	NA								
4216	Electrical goods .....	1.52	1.54	1.55	NA								
4217	Hardware, & plumbing & heating equip. & supplies .....	2.00	1.97	1.99	NA								
4218	Machinery, equipment, & supplies .....	2.26	2.22	2.24	NA								
4219	Miscellaneous durable goods .....	1.65	1.63	1.65	NA								
422	<b>Nondurable goods</b> .....	<b>0.95</b>	<b>0.95</b>	<b>0.98</b>	<b>NA</b>								
4221	Paper & paper products .....	1.03	1.05	1.04	NA								
4222	Drugs & druggists' sundries .....	1.48	1.45	1.53	NA								
4223	Apparel, piece goods, & notions .....	1.61	1.67	1.73	NA								
4224	Groceries & related products .....	0.66	0.65	0.65	NA								
4225	Farm product raw materials .....	1.14	1.13	1.10	NA								
4226	Chemicals & allied products .....	1.12	1.08	1.11	NA								
4227	Petroleum & petroleum products .....	0.27	0.30	0.31	NA								
4228	Beer, wine, & distilled alcoholic beverages .....	1.08	1.06	1.11	NA								
4229	Miscellaneous nondurable goods .....	1.14	1.16	1.21	NA								

<sup>P</sup>Preliminary estimates.

(NA) Not applicable.

<sup>1</sup>Data adjusted for seasonal variations and, in the case of sales, also for trading-day differences.

Note: Cumulative seasonally adjusted sales estimates are not tabulated.

**Table 1. Revised Adjusted and Unadjusted Estimates of Monthly Sales, Inventories, and Inventories/Sales Ratios of Merchant Wholesalers: January 1992 to March 2001—Con.**

[Sales and Inventories in millions of dollars]

NAICS Code	Kind of business	2001												Total
		Jan.	Feb.	Mar. <sup>b</sup>	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
	<b>UNADJUSTED<sup>a</sup></b>													
	Sales, total .....	224,706	212,467	240,212	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
421	Durable goods .....	110,826	106,786	123,602	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4211	Motor vehicle & motor vehicle parts & supplies .....	15,162	14,744	17,775	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4212	Furniture & home furnishings .....	3,517	3,411	3,932	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4213	Lumber & other construction materials .....	5,265	5,124	6,058	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4214	Professional & commercial equip. & supplies .....	21,240	20,192	23,777	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
42143	Computer & computer peripheral equip. & software .....	12,385	11,354	13,424	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4215	Metals & minerals, ex. petroleum .....	8,002	7,664	8,316	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4216	Electrical goods .....	18,824	17,577	20,047	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4217	Hardware, & plumbing & heating equip. & supplies .....	5,023	4,813	5,349	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4218	Machinery, equipment, & supplies .....	20,801	20,456	23,909	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4219	Miscellaneous durable goods .....	12,992	12,805	14,439	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
422	Nondurable goods .....	113,880	105,681	116,610	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4221	Paper & paper products .....	6,645	5,997	6,633	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4222	Drugs & druggists' sundries .....	16,056	13,999	15,475	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4223	Apparel, piece goods, & notions .....	7,268	7,658	8,254	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4224	Groceries & related products .....	32,233	30,194	34,812	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4225	Farm product raw materials .....	10,418	9,259	9,980	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4226	Chemicals & allied products .....	5,025	4,817	5,248	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4227	Petroleum & petroleum products .....	16,095	13,951	13,774	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4228	Beer, wine, & distilled alcoholic beverages .....	5,026	5,141	5,915	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4229	Miscellaneous nondurable goods .....	15,114	14,665	16,519	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Inventories, total .....	306,500	304,107	302,327	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
421	Durable goods .....	192,183	192,075	190,299	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4211	Motor vehicle & motor vehicle parts & supplies .....	26,429	27,075	26,404	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4212	Furniture & home furnishings .....	5,842	5,759	5,734	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4213	Lumber & other construction materials .....	6,512	6,580	6,759	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4214	Professional & commercial equip. & supplies .....	26,458	26,156	25,282	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
42143	Computer & computer peripheral equip. & software .....	11,131	10,738	10,305	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4215	Metals & minerals, ex. petroleum .....	14,068	13,834	13,613	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4216	Electrical goods .....	30,321	29,799	29,347	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4217	Hardware, & plumbing & heating equip. & supplies .....	10,613	10,706	10,738	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4218	Machinery, equipment, & supplies .....	48,463	49,271	50,083	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4219	Miscellaneous durable goods .....	23,477	22,895	22,339	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
422	Nondurable goods .....	114,317	112,032	112,028	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4221	Paper & paper products .....	6,767	6,827	6,757	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4222	Drugs & druggists' sundries .....	23,504	21,831	23,123	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4223	Apparel, piece goods, & notions .....	12,787	12,673	12,278	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4224	Groceries & related products .....	21,797	21,372	21,510	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4225	Farm product raw materials .....	13,611	12,695	11,535	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4226	Chemicals & allied products .....	5,621	5,578	5,717	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4227	Petroleum & petroleum products .....	4,286	4,300	4,219	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4228	Beer, wine, & distilled alcoholic beverages .....	6,307	6,404	6,656	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4229	Miscellaneous nondurable goods .....	19,637	20,352	20,233	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
	Inventories/sales ratios, total ..	1.36	1.43	1.26	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
421	Durable goods .....	1.73	1.80	1.54	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4211	Motor vehicle & motor vehicle parts & supplies .....	1.74	1.84	1.49	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4212	Furniture & home furnishings .....	1.66	1.69	1.46	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4213	Lumber & other construction materials .....	1.24	1.28	1.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4214	Professional & commercial equip. & supplies .....	1.25	1.30	1.06	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
42143	Computer & computer peripheral equip. & software .....	0.90	0.95	0.77	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4215	Metals & minerals, ex. petroleum .....	1.76	1.81	1.64	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4216	Electrical goods .....	1.61	1.70	1.46	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4217	Hardware, & plumbing & heating equip. & supplies .....	2.11	2.22	2.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4218	Machinery, equipment, & supplies .....	2.33	2.41	2.09	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4219	Miscellaneous durable goods .....	1.81	1.79	1.55	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
422	Nondurable goods .....	1.00	1.06	0.96	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4221	Paper & paper products .....	1.02	1.14	1.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4222	Drugs & druggists' sundries .....	1.46	1.56	1.49	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4223	Apparel, piece goods, & notions .....	1.76	1.65	1.49	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4224	Groceries & related products .....	0.68	0.71	0.62	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4225	Farm product raw materials .....	1.31	1.37	1.16	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4226	Chemicals & allied products .....	1.12	1.16	1.09	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4227	Petroleum & petroleum products .....	0.27	0.31	0.31	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4228	Beer, wine, & distilled alcoholic beverages .....	1.25	1.25	1.13	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
4229	Miscellaneous nondurable goods .....	1.30	1.39	1.22	NA	NA	NA	NA	NA	NA	NA	NA	NA	X

<sup>a</sup>Preliminary estimates.

<sup>b</sup>(NA) Not applicable.

(X) Cumulative data are not applicable for inventories or inventories/sales ratios.

<sup>c</sup>Data not adjusted for seasonal variations and, in the case of sales, also for trading-day differences.





**Table 1. Revised Adjusted and Unadjusted Estimates of Monthly Sales, Inventories, and Inventories/Sales Ratios of Merchant Wholesalers: January 1992 to March 2001—Con.**

[Sales and Inventories in millions of dollars]

NAICS Code	Kind of business	1999											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	<b>ADJUSTED<sup>1</sup></b>												
	Sales, total .....	199,635	202,464	205,290	205,522	209,518	211,500	212,286	214,320	215,233	217,541	220,825	222,836
421	Durable goods .....	106,487	109,200	109,716	109,418	111,348	112,457	113,113	113,370	113,919	115,364	116,675	118,979
4211	Motor vehicle & motor vehicle parts & supplies .....	14,773	16,292	15,733	15,787	15,987	16,413	16,401	16,420	16,538	17,050	16,810	17,136
4212	Furniture & home furnishings .....	3,395	3,465	3,448	3,445	3,480	3,510	3,705	3,590	3,536	3,659	3,626	3,680
4213	Lumber & other construction materials .....	5,470	5,626	5,706	5,771	5,937	6,047	6,104	5,967	6,097	6,072	6,221	6,150
4214	Professional & commercial equip. & supplies .....	21,463	21,633	22,064	21,928	22,690	22,809	22,897	22,951	22,957	23,118	23,258	23,763
42143	Computer & computer peripheral equip. & software .....	12,426	12,847	13,078	12,702	13,372	13,346	13,678	13,629	13,677	13,944	13,721	14,331
4215	Metals & minerals, ex. petroleum .....	8,003	7,920	7,819	7,777	7,759	7,756	7,889	7,690	7,677	8,066	8,295	8,419
4216	Electrical goods .....	15,758	16,375	16,612	16,707	16,825	17,082	17,279	17,439	17,576	17,940	18,572	19,083
4217	Hardware, & plumbing & heating equip. & supplies .....	5,243	5,240	5,333	5,278	5,311	5,262	5,266	5,336	5,268	5,245	5,311	5,338
4218	Machinery, equipment, & supplies .....	19,909	19,866	20,359	20,118	20,338	20,427	20,381	20,655	20,506	20,490	20,510	20,949
4219	Miscellaneous durable goods .....	12,473	12,783	12,642	12,607	13,021	13,151	13,191	13,322	13,764	13,724	14,072	14,461
422	Nondurable goods .....	93,148	93,264	95,574	96,104	98,170	99,043	99,173	100,950	101,314	102,177	104,150	103,857
4221	Paper & paper products .....	5,933	6,047	5,788	6,083	6,236	6,295	6,343	6,366	6,424	6,492	6,540	6,407
4222	Drugs & druggists' sundries .....	11,231	11,533	11,678	11,935	12,058	12,234	12,245	12,355	12,382	12,420	12,824	13,188
4223	Apparel, piece goods, & notions .....	6,895	6,808	7,432	7,066	7,209	7,079	7,012	7,090	7,110	7,145	7,471	7,438
4224	Groceries & related products .....	28,876	28,978	29,538	29,526	30,089	29,578	29,818	30,497	30,918	30,966	31,378	31,301
4225	Farm product raw materials .....	8,392	8,578	8,462	8,146	8,649	8,765	8,469	8,331	8,513	8,583	8,639	8,112
4226	Chemicals & allied products .....	4,568	4,335	4,530	4,477	4,548	4,674	4,651	4,655	4,632	4,689	4,782	4,829
4227	Petroleum & petroleum products .....	9,290	10,019	10,719	11,053	11,246	11,593	12,203	12,046	11,877	12,106	12,226	
4228	Beer, wine, & distilled alcoholic beverages .....	5,417	5,431	5,410	5,484	5,529	5,532	5,551	5,666	5,689	5,817	5,860	5,778
4229	Miscellaneous nondurable goods .....	12,546	12,734	12,717	12,668	12,799	13,640	13,491	13,787	13,600	14,188	14,550	14,578
	Inventories, total .....	268,586	270,512	271,381	271,615	272,187	272,699	275,145	276,411	277,916	280,153	283,044	284,317
421	Durable goods .....	174,369	175,195	175,849	174,940	175,822	176,666	177,746	177,722	179,039	180,475	182,893	183,761
4211	Motor vehicle & motor vehicle parts & supplies .....	22,821	22,959	23,371	23,371	23,780	23,941	24,399	24,570	25,010	25,053	25,594	25,760
4212	Furniture & home furnishings .....	5,053	5,119	5,118	5,034	5,055	5,130	5,173	5,132	5,195	5,344	5,238	5,387
4213	Lumber & other construction materials .....	5,938	5,944	6,060	6,151	6,255	6,269	6,417	6,472	6,552	6,626	6,570	6,607
4214	Professional & commercial equip. & supplies .....	25,682	26,207	26,039	25,347	25,679	26,033	25,866	25,796	25,801	26,192	26,542	26,687
42143	Computer & computer peripheral equip. & software .....	11,809	12,470	11,819	11,135	11,839	11,954	11,856	11,824	11,555	11,881	12,051	12,165
4215	Metals & minerals, ex. petroleum .....	14,674	14,224	13,757	13,697	13,792	13,753	13,587	13,443	13,527	13,703	13,926	14,114
4216	Electrical goods .....	23,680	23,978	23,832	23,647	23,965	24,066	24,640	24,703	25,044	25,423	25,985	26,460
4217	Hardware, & plumbing & heating equip. & supplies .....	9,935	9,856	9,888	9,837	9,846	9,851	9,946	9,807	9,896	9,940	10,076	10,043
4218	Machinery, equipment, & supplies .....	47,930	48,245	48,616	48,952	48,571	48,808	49,112	48,894	48,814	48,697	48,899	48,507
4219	Miscellaneous durable goods .....	18,656	18,663	19,168	18,904	18,879	18,815	18,606	18,905	19,200	19,497	20,063	20,196
422	Nondurable goods .....	94,217	95,317	95,532	96,675	96,365	96,033	97,399	98,689	98,877	99,678	100,151	100,556
4221	Paper & paper products .....	5,744	5,783	5,853	5,893	5,919	5,969	6,026	6,068	6,105	6,126	6,191	6,000
4222	Drugs & druggists' sundries .....	15,680	15,918	16,102	16,809	17,288	17,542	17,803	17,962	18,033	18,537	18,524	18,666
4223	Apparel, piece goods, & notions .....	12,847	13,402	12,891	12,627	12,532	12,245	12,250	12,229	12,034	12,109	12,198	12,250
4224	Groceries & related products .....	19,364	19,754	20,025	20,508	20,370	20,053	20,629	20,881	20,863	21,004	21,382	21,495
4225	Farm product raw materials .....	9,933	9,851	9,991	10,300	10,222	10,038	10,101	10,839	10,780	10,566	10,119	9,942
4226	Chemicals & allied products .....	5,816	5,823	5,685	5,677	5,646	5,590	5,661	5,559	5,613	5,647	5,639	5,789
4227	Petroleum & petroleum products .....	3,642	3,697	3,733	3,774	3,730	3,871	3,963	3,866	3,958	3,909	3,952	3,870
4228	Beer, wine, & distilled alcoholic beverages .....	5,828	6,016	6,189	6,090	6,316	6,135	6,211	6,189	6,058	6,045	6,002	6,102
4229	Miscellaneous nondurable goods .....	15,363	15,073	15,063	14,997	14,342	14,590	14,755	15,096	15,433	15,735	16,144	16,442
	Inventories/sales ratios, total .....	1.35	1.34	1.32	1.32	1.30	1.29	1.30	1.29	1.29	1.29	1.28	1.28
421	Durable goods .....	1.64	1.60	1.60	1.60	1.58	1.57	1.57	1.57	1.57	1.56	1.57	1.54
4211	Motor vehicle & motor vehicle parts & supplies .....	1.54	1.41	1.49	1.48	1.49	1.46	1.46	1.49	1.50	1.51	1.47	1.50
4212	Furniture & home furnishings .....	1.49	1.48	1.48	1.46	1.45	1.46	1.40	1.43	1.47	1.46	1.44	1.46
4213	Lumber & other construction materials .....	1.09	1.06	1.06	1.07	1.05	1.04	1.05	1.08	1.07	1.09	1.06	1.07
4214	Professional & commercial equip. & supplies .....	1.20	1.21	1.18	1.16	1.13	1.14	1.13	1.12	1.12	1.13	1.14	1.12
42143	Computer & computer peripheral equip. & software .....	0.95	0.97	0.90	0.88	0.89	0.90	0.87	0.87	0.84	0.85	0.88	0.85
4215	Metals & minerals, ex. petroleum .....	1.83	1.80	1.76	1.76	1.78	1.77	1.72	1.75	1.76	1.70	1.68	1.68
4216	Electrical goods .....	1.50	1.46	1.43	1.42	1.42	1.41	1.43	1.42	1.42	1.42	1.40	1.39
4217	Hardware, & plumbing & heating equip. & supplies .....	1.89	1.88	1.85	1.86	1.85	1.87	1.89	1.84	1.88	1.90	1.90	1.88
4218	Machinery, equipment, & supplies .....	2.41	2.43	2.39	2.43	2.39	2.39	2.41	2.37	2.38	2.38	2.38	2.32
4219	Miscellaneous durable goods .....	1.50	1.46	1.52	1.50	1.45	1.43	1.41	1.42	1.39	1.42	1.43	1.40
422	Nondurable goods .....	1.01	1.02	1.00	1.01	0.98	0.97	0.98	0.98	0.98	0.98	0.96	0.97
4221	Paper & paper products .....	0.97	0.96	1.01	0.97	0.95	0.95	0.95	0.95	0.95	0.94	0.95	0.94
4222	Drugs & druggists' sundries .....	1.40	1.38	1.38	1.41	1.43	1.43	1.45	1.45	1.46	1.49	1.44	1.42
4223	Apparel, piece goods, & notions .....	1.86	1.97	1.73	1.79	1.74	1.73	1.75	1.72	1.69	1.69	1.63	1.65
4224	Groceries & related products .....	0.67	0.68	0.68	0.69	0.68	0.68	0.69	0.68	0.67	0.68	0.69	0.69
4225	Farm product raw materials .....	1.18	1.15	1.18	1.26	1.18	1.15	1.19	1.30	1.27	1.23	1.17	1.23
4226	Chemicals & allied products .....	1.27	1.34	1.25	1.27	1.24	1.20	1.19	1.21	1.21	1.20	1.18	1.20
4227	Petroleum & petroleum products .....	0.39	0.42	0.37	0.35	0.34	0.34	0.34	0.32	0.33	0.33	0.33	0.32
4228	Beer, wine, & distilled alcoholic beverages .....	1.08	1.11	1.14	1.11	1.14	1.11	1.12	1.12	1.09	1.06	1.04	1.06
4229	Miscellaneous nondurable goods .....	1.22	1.18	1.18	1.18	1.12	1.07	1.09	1.09	1.13	1.11	1.11	1.13

<sup>1</sup>Data adjusted for seasonal variations and, in the case of sales, also for trading-day differences.

Note: Cumulative seasonally adjusted sales estimates are not tabulated.











**Table 1. Revised Adjusted and Unadjusted Estimates of Monthly Sales, Inventories, and Inventories/Sales Ratios of Merchant Wholesalers: January 1992 to March 2001—Con.**

[Sales and Inventories in millions of dollars]

NAICS Code	Kind of business	1996											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	<b>ADJUSTED<sup>1</sup></b>												
	Sales, total .....	181,238	181,252	183,420	183,939	184,791	184,697	187,520	188,509	187,728	189,367	190,478	188,901
421	Durable goods .....	94,214	94,008	95,369	94,869	95,932	95,526	95,569	95,904	96,855	97,421	98,986	97,705
4211	Motor vehicle & motor vehicle parts & supplies .....	14,238	13,803	13,939	13,900	13,626	13,563	13,885	13,530	13,486	13,564	13,802	13,876
4212	Furniture & home furnishings .....	2,808	2,908	2,880	2,933	3,076	3,120	3,077	3,029	3,087	3,069	3,209	3,171
4213	Lumber & other construction materials .....	4,602	4,661	4,794	4,716	4,866	4,996	4,919	5,026	5,114	5,067	5,106	4,933
4214	Professional & commercial equip. & supplies .....	17,345	17,749	18,070	17,981	18,573	18,422	18,403	18,572	18,553	18,311	18,967	18,503
42143	Computer & computer peripheral equip. & software .....	NA											
4215	Metals & minerals, ex. petroleum .....	7,843	7,827	7,416	7,833	8,066	7,740	7,756	7,935	7,648	7,886	8,196	8,006
4216	Electrical goods .....	14,588	14,364	14,658	14,288	13,974	14,241	14,154	14,068	14,342	14,350	14,337	13,640
4217	Hardware, & plumbing & heating equip. & supplies .....	4,357	4,318	4,404	4,351	4,372	4,499	4,433	4,517	4,762	4,714	4,701	4,666
4218	Machinery, equipment, & supplies .....	16,759	16,644	17,103	17,173	16,924	16,721	16,707	16,779	17,123	17,639	18,105	17,984
4219	Miscellaneous durable goods .....	11,674	11,734	12,105	11,694	12,455	12,224	12,235	12,448	12,740	12,821	12,563	12,926
422	Nondurable goods .....	87,024	87,244	88,051	89,070	88,859	89,171	91,951	92,605	90,873	91,946	91,492	91,196
4221	Paper & paper products .....	5,356	5,440	5,410	5,403	5,421	5,351	5,452	5,428	5,313	5,339	5,316	5,419
4222	Drugs & druggists' sundries .....	7,443	7,383	7,414	7,603	7,654	7,718	7,804	7,898	8,181	8,253	8,261	8,267
4223	Apparel, piece goods, & notions .....	5,185	5,302	5,863	5,952	5,991	6,242	6,374	6,201	6,491	6,453	6,323	6,676
4224	Groceries & related products .....	26,572	26,400	26,180	26,081	26,010	25,573	27,037	26,904	26,347	26,951	26,642	26,126
4225	Farm product raw materials .....	11,002	11,106	11,606	11,398	11,033	11,587	12,113	12,562	11,470	10,878	11,172	10,976
4226	Chemicals & allied products .....	4,280	4,297	4,394	4,494	4,532	4,463	4,473	4,515	4,509	4,495	4,455	4,447
4227	Petroleum & petroleum products .....	11,089	11,307	11,585	11,745	11,819	11,553	11,628	11,746	11,974	12,763	12,712	12,964
4228	Beer, wine, & distilled alcoholic beverages .....	4,630	4,675	4,558	4,642	4,668	4,686	4,683	4,709	4,604	4,581	4,704	4,642
4229	Miscellaneous nondurable goods .....	11,467	11,334	11,041	11,752	11,731	11,998	12,387	12,642	11,984	12,233	11,907	11,679
	Inventories, total .....	236,670	236,372	236,207	239,924	239,743	238,898	239,276	239,014	236,929	237,648	237,860	237,852
421	Durable goods .....	150,594	150,326	150,078	151,196	150,674	150,404	151,191	151,900	152,204	152,073	152,634	152,649
4211	Motor vehicle & motor vehicle parts & supplies .....	22,106	22,359	21,448	22,394	22,216	22,293	22,540	22,358	21,705	22,130	22,434	21,697
4212	Furniture & home furnishings .....	4,621	4,728	4,766	4,660	4,715	4,752	4,757	4,753	4,776	4,705	4,756	4,736
4213	Lumber & other construction materials .....	5,307	5,308	5,310	5,298	5,317	5,408	5,396	5,521	5,698	5,576	5,566	5,616
4214	Professional & commercial equip. & supplies .....	23,300	23,053	23,419	23,233	23,181	23,259	23,028	23,698	24,059	23,169	23,721	24,088
42143	Computer & computer peripheral equip. & software .....	NA											
4215	Metals & minerals, ex. petroleum .....	12,343	12,231	12,238	12,163	12,173	12,019	12,205	12,343	12,282	12,577	12,750	12,955
4216	Electrical goods .....	22,745	22,592	22,545	22,847	22,925	22,062	22,039	21,786	21,497	21,650	21,862	21,630
4217	Hardware, & plumbing & heating equip. & supplies .....	8,244	8,268	8,290	8,306	8,355	8,342	8,516	8,523	8,492	8,660	8,661	8,795
4218	Machinery, equipment, & supplies .....	35,942	36,038	36,256	36,172	36,017	36,345	36,688	36,841	37,677	37,209	36,980	37,185
4219	Miscellaneous durable goods .....	15,986	15,749	15,806	16,123	15,775	15,924	16,022	16,077	16,018	16,397	15,904	15,947
422	Nondurable goods .....	86,076	86,046	86,129	88,728	89,069	88,494	88,085	87,114	84,725	85,575	85,226	85,203
4221	Paper & paper products .....	5,161	5,074	5,082	5,083	5,086	5,142	5,065	5,068	5,264	5,133	5,008	5,123
4222	Drugs & druggists' sundries .....	10,498	10,653	10,617	10,878	10,724	10,797	11,069	11,088	10,680	11,373	11,593	11,833
4223	Apparel, piece goods, & notions .....	11,382	11,588	11,342	11,728	11,741	11,684	11,618	11,397	11,485	11,299	10,991	11,796
4224	Groceries & related products .....	18,503	18,423	18,721	18,789	18,662	18,713	18,988	19,068	18,796	18,589	18,264	18,231
4225	Farm product raw materials .....	12,133	11,998	12,128	12,909	13,503	13,107	11,916	11,288	9,651	9,738	9,669	9,527
4226	Chemicals & allied products .....	4,907	5,027	5,060	5,150	4,984	4,964	4,934	5,107	5,070	5,217	5,473	5,257
4227	Petroleum & petroleum products .....	4,298	4,320	4,374	4,372	4,201	4,134	4,187	4,382	4,287	4,488	4,536	4,683
4228	Beer, wine, & distilled alcoholic beverages .....	4,637	4,665	4,774	4,883	4,869	4,933	5,039	4,897	4,963	5,120	5,118	4,984
4229	Miscellaneous nondurable goods .....	14,557	14,298	14,031	14,936	15,299	15,020	15,269	14,819	14,529	14,618	14,574	13,769
	Inventories/sales ratios, total ..	1.31	1.30	1.29	1.30	1.30	1.29	1.28	1.27	1.26	1.25	1.25	1.26
421	Durable goods .....	1.60	1.60	1.57	1.59	1.57	1.57	1.58	1.58	1.57	1.56	1.54	1.56
4211	Motor vehicle & motor vehicle parts & supplies .....	1.55	1.62	1.54	1.61	1.63	1.64	1.62	1.65	1.61	1.63	1.63	1.56
4212	Furniture & home furnishings .....	1.65	1.63	1.65	1.59	1.53	1.52	1.55	1.57	1.55	1.53	1.48	1.49
4213	Lumber & other construction materials .....	1.15	1.14	1.11	1.12	1.09	1.08	1.10	1.10	1.11	1.10	1.09	1.14
4214	Professional & commercial equip. & supplies .....	1.34	1.30	1.30	1.29	1.25	1.26	1.25	1.28	1.30	1.27	1.25	1.30
42143	Computer & computer peripheral equip. & software .....	NA											
4215	Metals & minerals, ex. petroleum .....	1.57	1.56	1.65	1.55	1.51	1.55	1.57	1.56	1.61	1.59	1.56	1.62
4216	Electrical goods .....	1.56	1.57	1.54	1.60	1.64	1.55	1.56	1.55	1.50	1.51	1.52	1.59
4217	Hardware, & plumbing & heating equip. & supplies .....	1.89	1.91	1.88	1.91	1.91	1.85	1.92	1.89	1.78	1.84	1.84	1.88
4218	Machinery, equipment, & supplies .....	2.14	2.17	2.12	2.11	2.13	2.17	2.20	2.20	2.20	2.11	2.04	2.07
4219	Miscellaneous durable goods .....	1.37	1.34	1.31	1.38	1.27	1.30	1.31	1.29	1.26	1.26	1.27	1.23
422	Nondurable goods .....	0.99	0.99	0.98	1.00	1.00	0.99	0.96	0.94	0.93	0.93	0.93	0.93
4221	Paper & paper products .....	0.96	0.93	0.94	0.94	0.94	0.96	0.93	0.93	0.99	0.96	0.94	0.95
4222	Drugs & druggists' sundries .....	1.41	1.44	1.43	1.43	1.40	1.40	1.42	1.40	1.31	1.38	1.40	1.43
4223	Apparel, piece goods, & notions .....	2.20	2.19	1.93	1.97	1.96	1.87	1.82	1.84	1.77	1.75	1.74	1.77
4224	Groceries & related products .....	0.70	0.70	0.72	0.72	0.72	0.73	0.70	0.71	0.71	0.69	0.69	0.70
4225	Farm product raw materials .....	1.10	1.08	1.04	1.13	1.22	1.13	0.98	0.90	0.84	0.90	0.87	0.87
4226	Chemicals & allied products .....	1.15	1.17	1.15	1.15	1.10	1.11	1.10	1.13	1.12	1.16	1.23	1.18
4227	Petroleum & petroleum products .....	0.39	0.38	0.38	0.37	0.36	0.36	0.36	0.37	0.36	0.35	0.36	0.36
4228	Beer, wine, & distilled alcoholic beverages .....	1.00	1.00	1.05	1.05	1.04	1.05	1.08	1.04	1.08	1.12	1.09	1.07
4229	Miscellaneous nondurable goods .....	1.27	1.26	1.27	1.27	1.30	1.25	1.23	1.17	1.21	1.19	1.22	1.18

(NA) Not applicable.

<sup>1</sup>Data adjusted for seasonal variations and, in the case of sales, also for trading-day differences.

Note: Cumulative seasonally adjusted sales estimates are not tabulated.



















**Table 2. Estimated Annual Purchases, Gross Margins, and Gross Margin/Sales Ratios of Merchant Wholesalers by Kind of Business: 1992 through 1998**

[Purchases and gross margin in millions of dollars]

NAICS Code	Kind of business	1992	1993	1994	1995	1996	1997	1998	1999
	<b>Purchases, total</b>	<b>1,402,702</b>	<b>1,452,336</b>	<b>1,550,128</b>	<b>1,682,512</b>	<b>1,781,071</b>	<b>1,868,433</b>	<b>1,900,727</b>	<b>2,021,914</b>
<b>421</b>	<b>Durable goods</b>	<b>642,566</b>	<b>702,993</b>	<b>781,162</b>	<b>852,528</b>	<b>887,404</b>	<b>947,357</b>	<b>980,764</b>	<b>1,046,671</b>
4211	Motor vehicle & motor vehicle parts & supplies	122,553	124,965	133,543	130,215	131,815	132,075	136,842	155,952
4212	Furniture & home furnishings	19,117	20,959	22,234	24,342	25,452	27,477	28,836	29,972
4213	Lumber & other construction materials	36,941	41,936	46,372	45,275	48,135	50,344	52,232	58,853
4214	Professional & commercial equip. & supplies	96,108	116,637	128,761	155,593	170,091	185,626	199,492	213,502
42143	Computer & computer peripheral equip. & software	NA	NA	NA	NA	NA	119,010	127,470	136,738
4215	Metals & minerals, ex. petroleum	62,234	63,354	72,493	75,148	75,430	81,175	79,257	76,431
4216	Electrical goods	74,722	90,364	108,916	128,526	131,253	141,998	145,602	161,498
4217	Hardware, & plumbing & heating equip. & supplies	30,459	31,443	36,530	38,435	40,295	42,910	45,301	47,676
4218	Machinery, equipment, & supplies	109,859	119,288	129,812	142,662	153,809	166,476	179,814	180,575
4219	Miscellaneous durable goods	90,573	94,047	102,501	112,332	111,124	119,276	113,388	122,212
<b>422</b>	<b>Nondurable goods</b>	<b>760,136</b>	<b>749,343</b>	<b>768,966</b>	<b>829,984</b>	<b>893,667</b>	<b>921,076</b>	<b>919,963</b>	<b>975,243</b>
4221	Paper & paper products	36,801	37,684	42,349	51,713	50,696	52,104	54,795	58,607
4222	Drugs & druggists' sundries	61,685	62,154	67,291	73,989	83,077	94,211	108,830	127,842
4223	Apparel, piece goods, & notions	45,020	47,497	49,516	48,373	51,813	59,064	59,192	59,353
4224	Groceries & related products	231,804	237,149	242,121	255,140	261,969	274,316	287,350	299,340
4225	Farm product raw materials	99,335	89,447	89,283	106,174	122,385	115,613	99,987	93,765
4226	Chemicals & allied products	29,504	30,553	33,522	38,525	40,613	42,414	41,309	41,233
4227	Petroleum & petroleum products	126,077	115,156	112,371	113,687	129,671	125,891	104,401	119,923
4228	Beer, wine, & distilled alcoholic beverages	37,957	38,635	40,041	39,863	42,447	44,319	46,582	50,343
4229	Miscellaneous nondurable goods	91,953	91,068	92,472	102,520	110,996	113,144	117,517	124,837
	<b>Gross margin, total</b>	<b>NA</b>	<b>365,969</b>	<b>400,430</b>	<b>448,723</b>	<b>460,745</b>	<b>483,703</b>	<b>492,010</b>	<b>533,721</b>
<b>421</b>	<b>Durable goods</b>	<b>NA</b>	<b>211,515</b>	<b>235,719</b>	<b>265,793</b>	<b>272,072</b>	<b>287,690</b>	<b>294,729</b>	<b>314,993</b>
4211	Motor vehicle & motor vehicle parts & supplies	NA	27,256	30,056	33,051	33,384	35,379	36,975	42,356
4212	Furniture & home furnishings	NA	8,973	9,216	10,619	11,140	11,653	11,783	12,896
4213	Lumber & other construction materials	NA	9,601	9,991	9,793	11,212	11,366	11,193	13,138
4214	Professional & commercial equip. & supplies	NA	39,778	39,485	45,153	50,876	54,620	53,313	59,561
42143	Computer & computer peripheral equip. & software	NA	NA	NA	NA	NA	NA	22,206	24,660
4215	Metals & minerals, ex. petroleum	NA	16,106	18,108	19,608	19,540	20,236	18,606	18,130
4216	Electrical goods	NA	28,445	35,075	42,908	39,620	40,716	42,840	49,124
4217	Hardware, & plumbing & heating equip. & supplies	NA	11,976	13,812	13,726	14,526	14,515	15,871	15,949
4218	Machinery, equipment, & supplies	NA	42,868	47,817	52,674	54,610	61,631	68,597	65,015
4219	Miscellaneous durable goods	NA	26,512	32,159	38,261	37,164	37,574	35,551	38,824
<b>422</b>	<b>Nondurable goods</b>	<b>NA</b>	<b>154,454</b>	<b>164,711</b>	<b>182,930</b>	<b>188,673</b>	<b>196,013</b>	<b>197,281</b>	<b>218,728</b>
4221	Paper & paper products	NA	12,674	13,257	14,801	14,064	15,012	15,193	16,654
4222	Drugs & druggists' sundries	NA	7,863	9,473	9,380	12,609	14,796	17,739	21,687
4223	Apparel, piece goods, & notions	NA	18,891	19,732	18,778	21,637	26,814	25,013	25,183
4224	Groceries & related products	NA	46,060	48,064	54,263	55,627	56,681	57,279	64,493
4225	Farm product raw materials	NA	10,055	10,692	15,935	12,135	10,371	8,012	7,560
4226	Chemicals & allied products	NA	9,794	10,137	12,214	13,267	13,891	14,017	14,207
4227	Petroleum & petroleum products	NA	12,165	13,771	12,713	14,285	13,065	11,382	14,117
4228	Beer, wine, & distilled alcoholic beverages	NA	12,313	12,081	12,751	13,812	14,357	15,533	17,412
4229	Miscellaneous nondurable goods	NA	24,639	27,504	32,095	31,237	31,026	33,113	37,415
	<b>Gross margin/sales ratio, total</b>	<b>NA</b>	<b>20.22</b>	<b>20.71</b>	<b>21.22</b>	<b>20.57</b>	<b>20.72</b>	<b>20.67</b>	<b>21.02</b>
<b>421</b>	<b>Durable goods</b>	<b>NA</b>	<b>23.27</b>	<b>23.47</b>	<b>24.01</b>	<b>23.52</b>	<b>23.51</b>	<b>23.28</b>	<b>23.30</b>
4211	Motor vehicle & motor vehicle parts & supplies	NA	17.87	18.40	20.30	20.15	21.23	21.34	21.67
4212	Furniture & home furnishings	NA	30.05	29.45	30.61	30.49	29.88	29.15	30.29
4213	Lumber & other construction materials	NA	18.71	17.84	17.75	18.97	18.54	17.58	18.43
4214	Professional & commercial equip. & supplies	NA	25.63	23.87	22.81	23.10	23.03	20.98	21.88
42143	Computer & computer peripheral equip. & software	NA	NA	NA	NA	NA	NA	14.73	15.29
4215	Metals & minerals, ex. petroleum	NA	20.48	20.32	20.60	20.69	20.12	19.16	19.08
4216	Electrical goods	NA	24.12	24.83	25.55	23.10	22.33	22.94	23.65
4217	Hardware, & plumbing & heating equip. & supplies	NA	27.81	28.06	26.41	26.76	25.35	26.30	25.16
4218	Machinery, equipment, & supplies	NA	26.49	27.42	27.54	26.43	27.53	28.28	26.57
4219	Miscellaneous durable goods	NA	22.33	23.99	25.52	25.08	24.14	24.08	24.36
<b>422</b>	<b>Nondurable goods</b>	<b>NA</b>	<b>17.14</b>	<b>17.72</b>	<b>18.15</b>	<b>17.42</b>	<b>17.65</b>	<b>17.71</b>	<b>18.42</b>
4221	Paper & paper products	NA	25.24	23.91	22.40	21.69	22.58	21.72	22.19
4222	Drugs & druggists' sundries	NA	11.40	12.40	11.20	13.37	13.78	14.24	14.83
4223	Apparel, piece goods, & notions	NA	28.76	28.80	27.78	29.59	31.79	29.71	29.40
4224	Groceries & related products	NA	16.24	16.58	17.56	17.50	17.17	16.63	17.84
4225	Farm product raw materials	NA	10.26	10.79	13.32	8.82	8.28	7.42	7.44
4226	Chemicals & allied products	NA	24.55	23.42	24.30	24.76	24.78	25.45	25.65
4227	Petroleum & petroleum products	NA	9.52	10.98	10.05	9.96	9.37	9.78	10.56
4228	Beer, wine, & distilled alcoholic beverages	NA	24.23	23.22	24.29	24.69	24.62	25.13	25.84
4229	Miscellaneous nondurable goods	NA	21.27	23.03	24.19	21.92	21.67	22.13	23.24

(NA) Not applicable.

**Table 3. Estimated Coefficients of Variation of Monthly Sales and End-of-Month Inventories**  
 [In percent]

NAICS code	Kind of Business	Sales		Inventories	
		Range	Median	Range	Median
421	Merchant wholesalers, total.....	0.9-1.3	1.1	1.6-1.9	1.8
	Durable goods .....	0.8-1.6	1.2	1.8-2.0	1.9
4211	Motor vehicle and motor vehicle parts and supplies .....	2.4-5.8	4.1	4.8-6.3	5.5
4212	Furniture and home furnishings .....	3.0-3.6	3.3	6.5-6.5	6.5
4213	Lumber and other construction materials .....	3.9-5.1	4.5	5.8-6.0	5.9
4214	Professional and commercial equipment and supplies .....	2.7-3.9	3.3	4.0-4.2	4.1
42143	Computer and computer peripheral equipment and software.....	4.1-6.4	5.2	5.2-5.4	5.3
4215	Metals and minerals, ex. petroleum.....	5.2-8.2	6.7	6.2-8.7	7.5
4216	Electrical Goods .....	2.5-4.1	3.3	3.9-4.4	4.2
4217	Hardware, plumbing and heating equipment and supplies.....	4.7-6.2	5.4	7.8-9.9	8.8
4218	Machinery, equipment, and supplies .....	2.7-3.4	3.0	3.5-4.7	4.1
4219	Miscellaneous durable goods .....	3.8-5.2	4.5	8.6-9.8	9.2
422	Nondurable goods.....	1.7-1.9	1.8	3.0-3.6	3.3
4221	Paper and paper products.....	4.6-5.3	5.0	3.5-3.8	3.6
4222	Drugs and druggists' sundries .....	4.1-4.4	4.3	5.6-6.0	5.8
4223	Apparel, piece goods, and notions .....	3.8-4.1	3.9	5.5-6.0	5.8
4224	Groceries and related products .....	2.7-3.1	2.9	6.5-9.7	8.1
4225	Farm product raw materials .....	4.1-4.5	4.3	12.4-14.7	13.5
4226	Chemicals and allied products .....	4.0-5.1	4.6	6.8-7.0	6.9
4227	Petroleum and petroleum products .....	4.7-5.7	5.2	5.6-7.2	6.4
4228	Beer, wine, and distilled alcoholic beverages .....	4.2-4.6	4.4	4.0-10.7	7.3
4229	Miscellaneous nondurable goods.....	6.9-8.4	7.7	7.2-8.6	7.9

Note: The coefficients of variation shown in Table 3 are based on data unadjusted for seasonal variations or trading-day differences. The ranges and medians are computed using final Monthly Wholesale Trade Survey estimates for January 2001 and February 2001 computed from the new NAICS-based sample.

**Table 4. Estimated Coefficients of Variation of Annual Sales, End-of-Year Inventories, Purchases, Gross Margins, and Gross Margin/Sales Ratios**

[In percent]

NAICS code	Kind of business	Sales	Inventories	Purchases	Gross margin	Gross margin/sales ratios
421	Merchant wholesalers, total .....	0.9	2.4	0.9	1.3	1.4
	Durable goods .....	1.4	3.2	1.5	1.7	1.8
4211	Motor vehicle and motor vehicle parts and supplies .....	2.8	5.6	3.1	3.9	5.1
4212	Furniture and home furnishings .....	2.5	5.7	3.2	4.6	4.5
4213	Lumber and other construction materials .....	2.2	5.0	2.3	3.3	3.2
4214	Professional and commercial equipment and supplies .....	2.4	3.4	2.8	3.6	3.1
42143	Computer and computer peripheral equipment and software.....	4.2	4.2	4.3	6.8	7.5
4215	Metals and minerals, ex. petroleum.....	2.4	4.3	2.1	5.9	7.8
4216	Electrical goods .....	2.5	4.1	2.6	3.3	3.9
4217	Hardware, plumbing and heating equipment and supplies .....	1.5	2.0	1.5	3.1	3.0
4218	Machinery, equipment, and supplies .....	4.5	11.9	5.2	2.6	3.6
4219	Miscellaneous durable goods .....	2.8	8.4	3.2	4.2	3.4
422	Nondurable goods .....	1.3	3.0	1.1	1.7	1.9
4221	Paper and paper products .....	1.8	3.9	1.7	3.4	3.8
4222	Drugs and druggists' sundries .....	2.0	3.8	2.4	7.5	6.7
4223	Apparel, piece goods, and notions .....	3.5	6.4	4.1	2.1	4.4
4224	Groceries and related products .....	1.6	7.3	1.7	4.6	4.2
4225	Farm product raw materials .....	3.2	7.5	3.3	5.1	3.5
4226	Chemicals and allied products .....	3.0	4.0	2.7	7.1	5.5
4227	Petroleum and petroleum products .....	4.8	6.0	4.8	5.2	6.0
4228	Beer, wine, and distilled alcoholic beverages .....	1.5	5.5	2.0	4.5	4.4
4229	Miscellaneous nondurable goods .....	5.1	12.8	4.5	5.4	7.1

Note: Estimated coefficients of variation are based on the results of the 1999 Annual Trade Survey, adjusted to the 1997 Economic Census.

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